CMS

User Manual

Document Version 1.1

www.netgeneration.fr

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INTRODUCTION

NGO CMS is Central Management Software (CMS) for use with NGO IP cameras. It not only has all the basic central camera management functions, but also provides additional features to extend the capabilities of your cameras.

System Requirements

Minimum Hardware Requirements

The following can be considered minimum hardware requirements for use with NGO CMS. The number of cameras and streaming bit rates (primarily for Live View) will have a significant impact on the hardware, particularly CPU and the video card. Therefore, it is suggested using hardware that exceeds the minimum requirements.

CPU: Quad-core Intel / AMD 3.0GHz CPU
Memory: 4GB
Storage: 1TB
Network: 10 / 100Mbps Ethernet
Dedicated Graphics Card: 1GB DDR5, NVIDIA GeForce 400 series / ATI Radeon HD 5800 series

NOTE: 17 or more megapixel camera installations should use servers using a minimum Core i5 / 8GB DDR3 along with Windows 7 64-bit OS.

OS & Software Requirements

Windows XP or Windows 7, 32 or 64 bit are compatible.

NOTE: 17 or more megapixel camera installations should use servers running 64-bit Windows 7 Pro OS.

As part of the NGO CMS installation, SQL Server 2005 Express, Visual Studio C++ 2008 Redistributable, Crystal Reports Basic for Visual Studio 2008, ffdshow and MS .NET framework will be installed if not already present on the PC.

QUICK SETUP

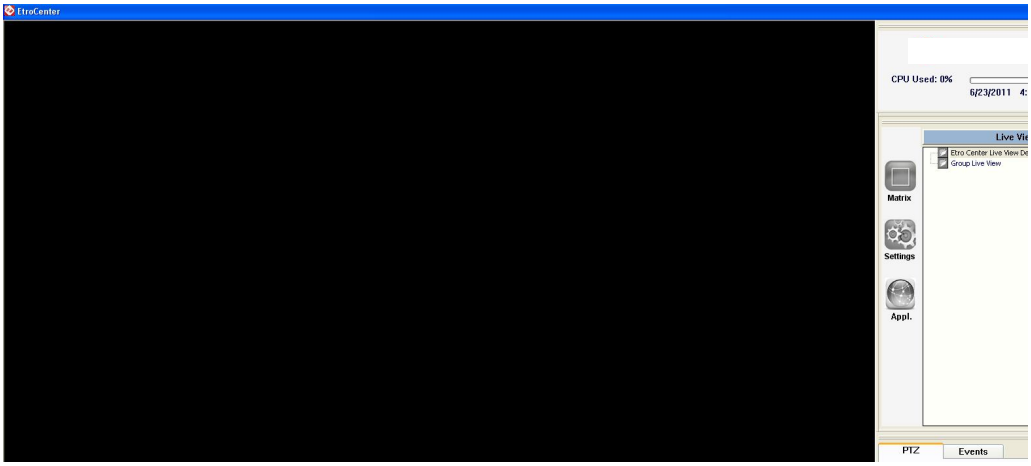
The Quick Setup section provides simplified configuration instructions for quickly connecting cameras to NGO CMS for recording and Live View. Please refer to other sections for more detailed NGO CMS configuration and operation instructions.

The section assumes NGO CMS has already been installed. If necessary, please refer to the NGO CMS Installation Guide for installation instructions.

If NGO CMS is not already running, start by clicking the NGO CMS icon or via the Windows Start button.

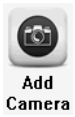
A Windows security alert may be presented on the first start. Select **Unblock**.

The NGO CMS Main Console is presented.

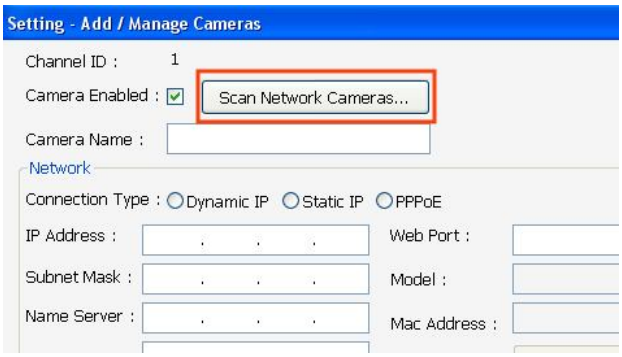


Click the **Settings** button.

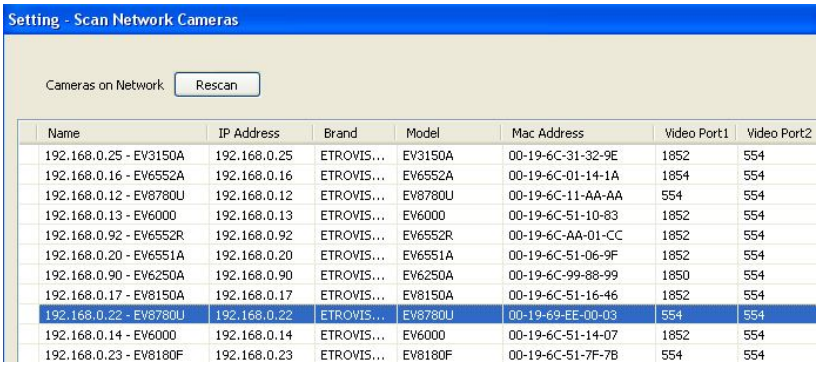
Click the **Add/Manage Cameras** icon.



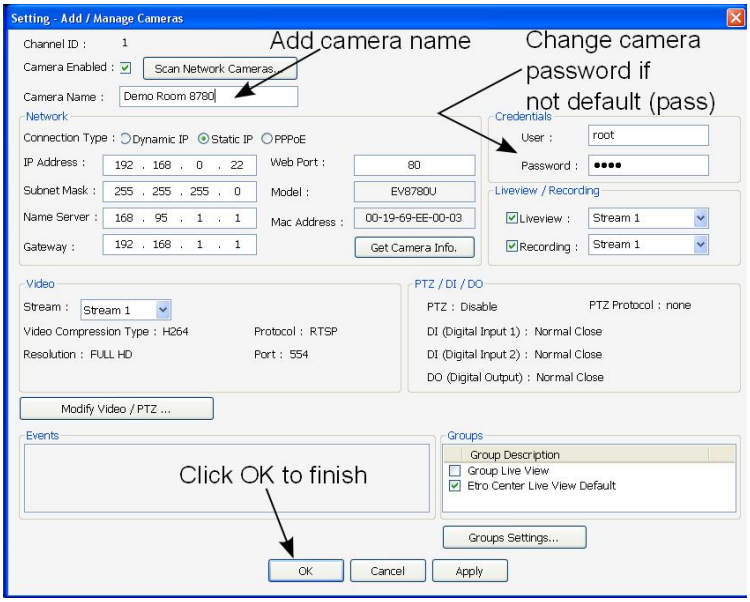
Click **Scan Network Cameras**. This assumes that cameras are connected and accessible via the network.



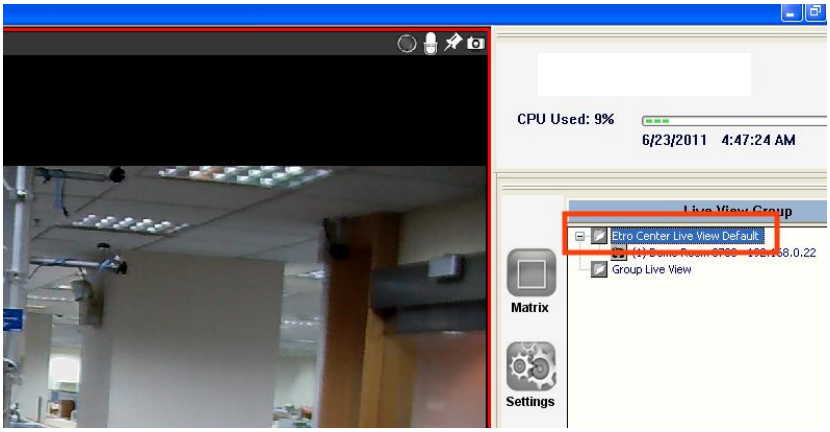
Select a camera by highlight the camera in the list.



Change the camera name, password if necessary.


Setting - Add / Manage Cameras
Add camera name
Change camera password if not default (pass)
Channel ID : 1
Camera Enabled :
Scan Network Cameras...
Camera Name : Demo Room 8780
Network
Connection Type : Dynamic IP Static IP PPPoE
IP Address : 192 . 168 . 0 . 22
Subnet Mask : 255 . 255 . 255 . 0
Name Server : 168 . 95 . 1 . 1
Gateway : 192 . 168 . 1 . 1
Web Port : 80
Model : EV8780U
Mac Address : 00-19-69-EE-00-03
Get Camera Info.
Credentials
User : root
Password : ••••
Liveview / Recording
Liveview : Stream 1
Recording : Stream 1
Video
Stream : Stream 1
Video Compression Type : H264
Protocol : RTSP
Resolution : FULL HD
Port : 554
PTZ / DI / DO
PTZ : Disable
PTZ Protocol : none
DI (Digital Input 1) : Normal Close
DI (Digital Input 2) : Normal Close
DO (Digital Output) : Normal Close
Modify Video / PTZ ...
Events
Click OK to finish
Groups
Group Description
Group Live View
Etro Center Live View Default
Groups Settings...
OK
Cancel
Apply

Back in the Main Console, click the **NGO CMS Live View Default** group to display video in the Main Console window.

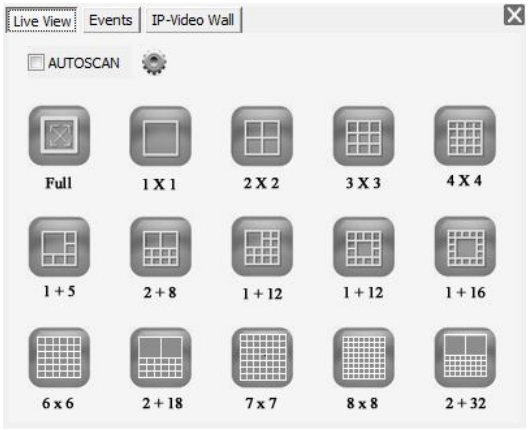


This assumes that the camera group setting was not changed in the previous step. If so, then click the group which the camera was added to.

After adding additional cameras, double click the group to refresh and display newly added cameras.

By default, only 1 pane is presented. If more than 1 camera is present in a group, click the Matrix icon to change the pane layout.

Select a matrix layout to change the Main Console's video display layout.

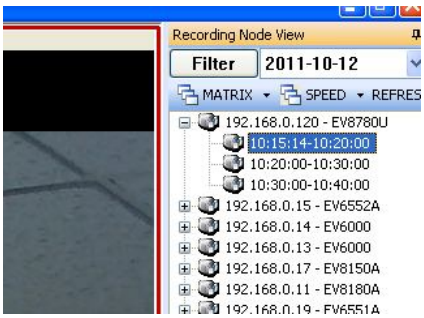


By default, any cameras added to NGO CMS will be continuously recording.

To playback video, click the Application button.

Click **Playback** to enter the playback window.

On the right side are the camera nodes. Expand a node and double click a video file to view the video.

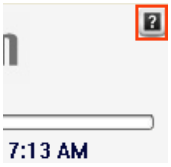


MAIN CONSOLE

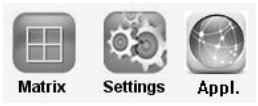
The Main Console provides the basic interface for NGO CMS.

The top right has a CPU meter for monitoring current PC CPU load.

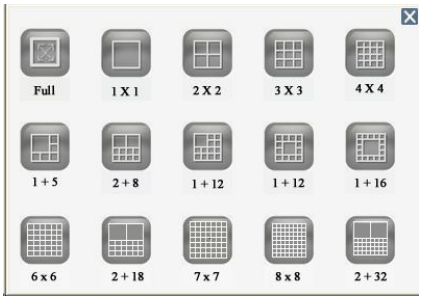
The pane also includes the Help button.



Much of NGO CMS's configuration is done via the **Matrix**, **Settings** and **Appl.** buttons.



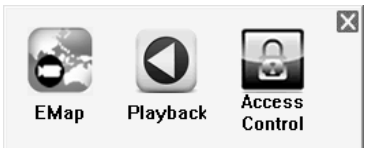
Matrix defines the Main Console video wall display style for the current camera group. Clicking this button will provide various options.



Full will display the video for a camera in full screen mode. Press the **Esc** key to exit full screen mode.

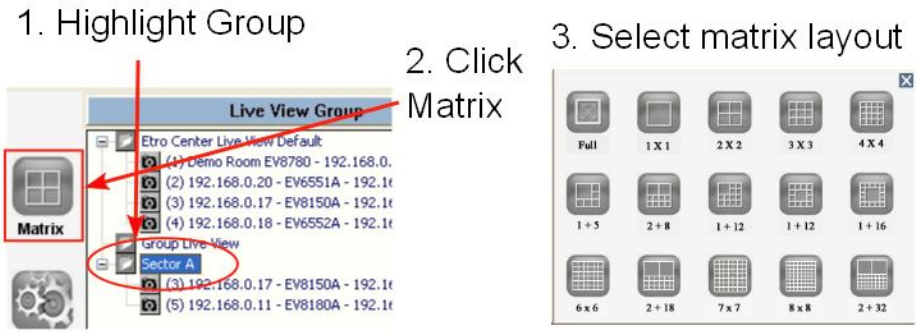
Settings provides a group of core functions which can be configured. These settings will be discussed at length in their respective document sections.

Appl. (Applications) provides additional functionality which can be used and / or configured.

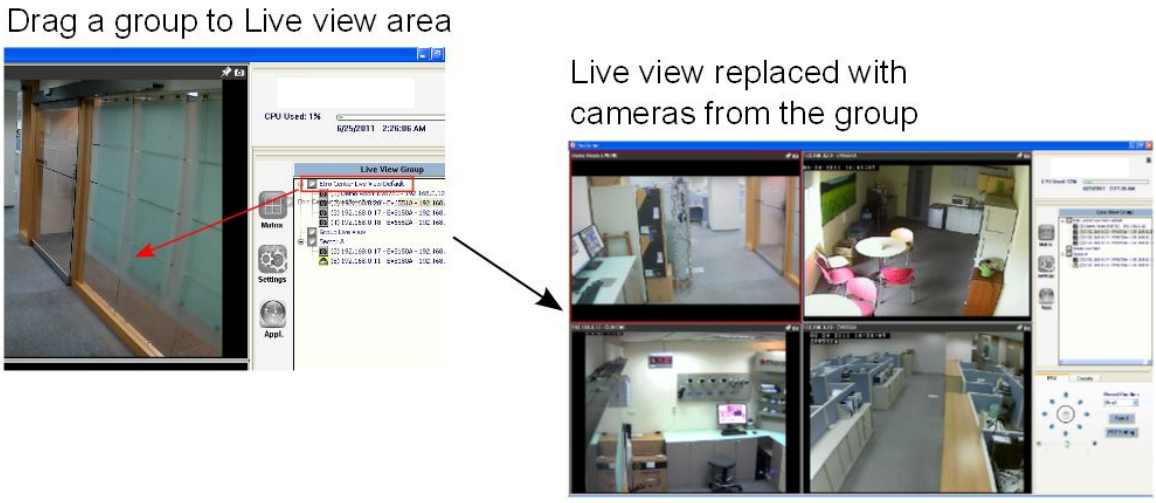


Live View and Matrix

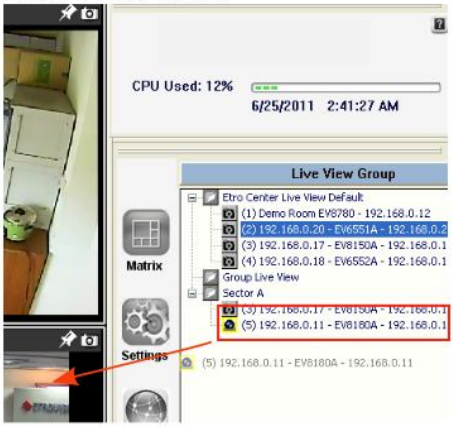
Matrix can be used to view up to 64 video from up to 64 cameras at once. To view a group of cameras in a specific matrix layout:



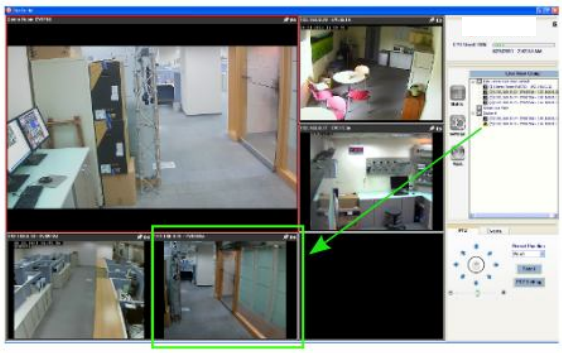
Drag a group to Live View

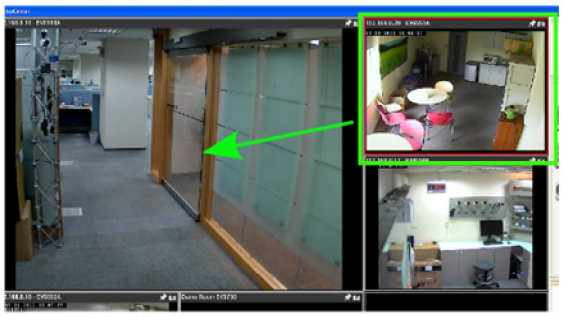


Drag a camera into the Live view area



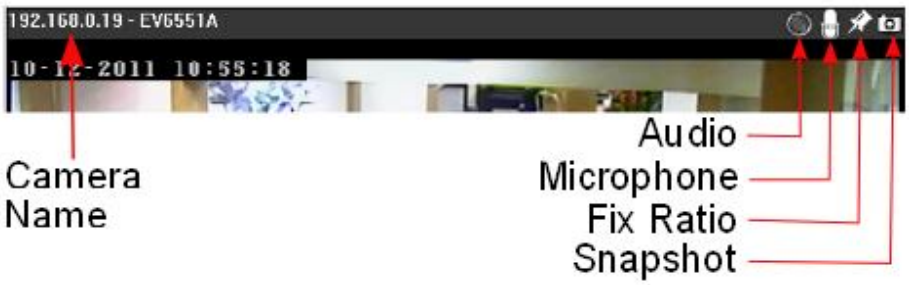
Camera video will be placed in an open pane





Click and drag the pane to another pane

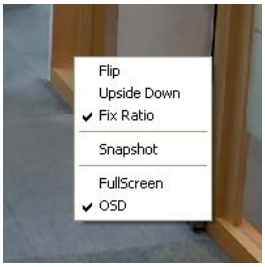
The two panes will switch positions



Fix Ratio switches from fix ratio to fit on the cell and the 16:9 standard ratio.

Snapshot will take a snapshot and open it in Windows Picture viewer which can then be used to save or open in another program.

Right click in a cell will bring a pop-up window with the following options.



OSD controls display of bar with information and controls at the top of the pane.

OSD Enabled

OSD Disabled

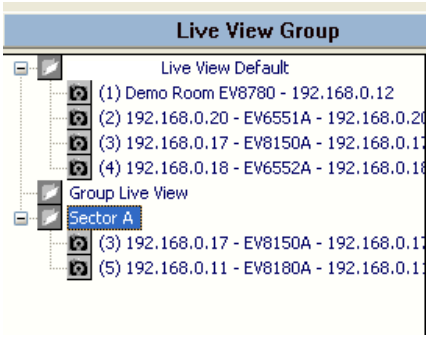
Live View Group

The Live View Group provides a tree based structure for managing cameras. Click on the +/- to expand/collapse groups.

The NGO CMS Live View Default and Group Live View are provided by default. Additional groups can be added via the Settings->Camera Groups.

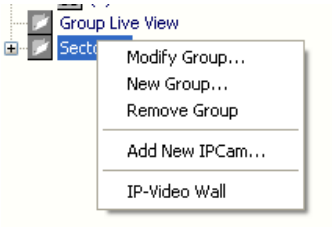
Drag & drop can be used to display camera groups or individual cameras in the live view area. Please see the "Live View and Matrix" section above which discusses this functionality.

Clicking on a group will display the group's cameras in the live view area.

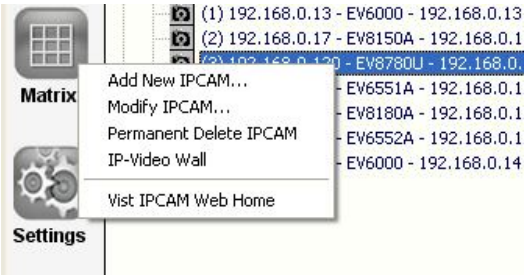


Right clicking on a group will bring up a pop-up window with group functionality or ways of modifying the group. Most of the functionality can also be done via the **Camera Groups** interface.

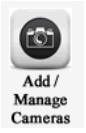
Detailed explanation of these functions can be found in that section.



Highlighting a camera and right clicking will also bring up a pop-window with functionality / modification that can be performed on the camera.



Much of this functionality can also be done via the **Add/Manage Cameras** interface.

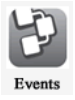


Detailed explanation of these functions can be found in that section.

Permanent Delete IPCAM will remove the camera from NGO CMS. The camera can be later re-added if necessary.

IP-Video Wall opens the camera in full screen view.

Event Setting can be used to review / modify the event settings for a specific camera. This can also be managed via the Event interface.

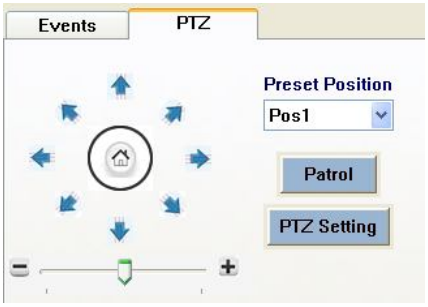


Detailed explanation of these functions can be found in that section.

Visit IPCAM Web Home will open the default browser and direct it to the cameras web UI address.

PTZ and Events

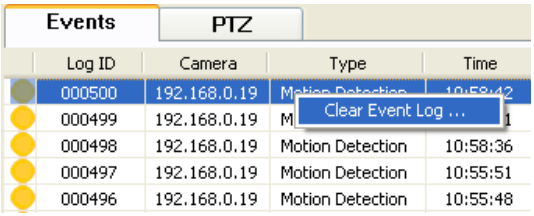
The PTZ panel provides controls for PTZ cameras.



Preset Position corresponds to preset points (1-3) already defined in the camera.

Patrol will cycle through the **Preset Position** points 1 time.

The **Events** panel is a log displaying events that have been triggered. The events are saved in the database ec_event_log table. Right clicking in the log area will bring up a dialog box.



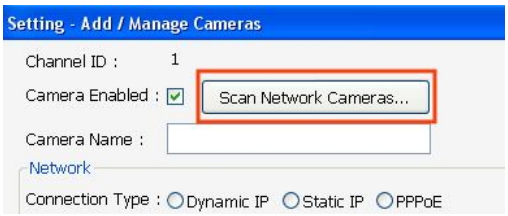
Clear Event Log will clear the events from the database.

CAMERA MANAGEMENT

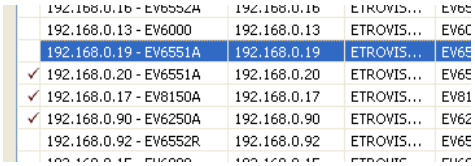
Add/Manage Cameras

To add or modify cameras, the Settings button or right click in the Live View Group area to access the camera management page.

Use the Scan Network Cameras button to bring up a list of available cameras. This can be used for both adding and modifying existing cameras.


Setting - Add / Manage Cameras
Channel ID : 1
Camera Enabled :
Scan Network Cameras...
Camera Name :
Network
Connection Type : Dynamic IP Static IP PPPoE

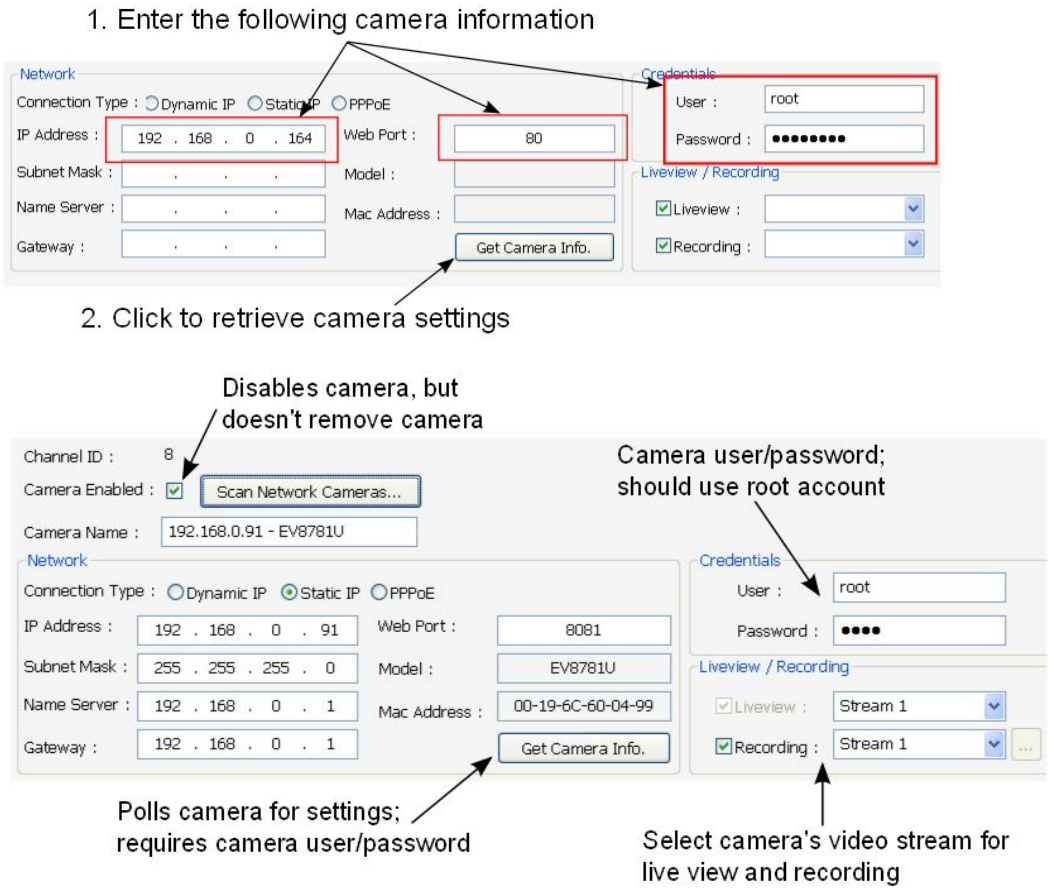
Highlight the camera to add or modify. Cameras already configured in NGO CMS will have a ✓ in the first column.



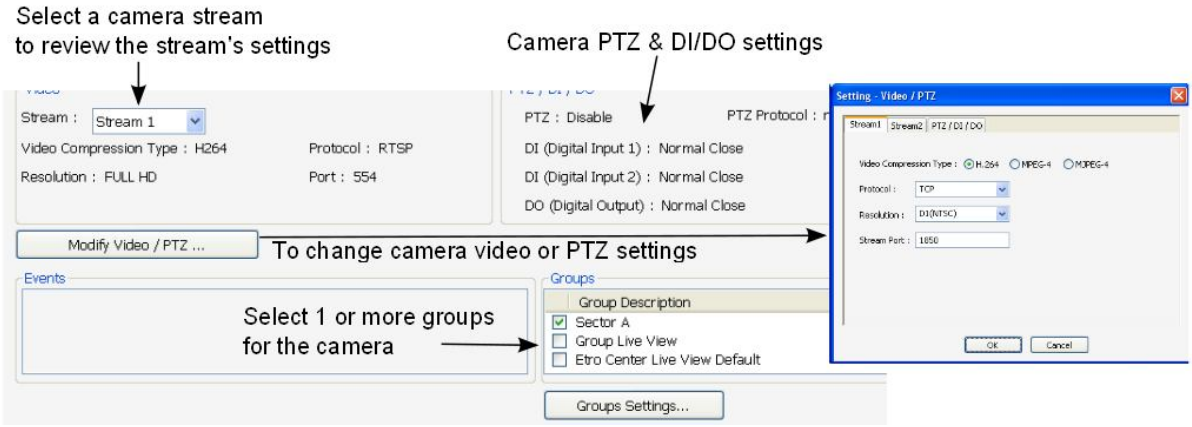
If the camera is already configured, then the screen will be populated with the camera settings. Otherwise, NGO CMS will poll the camera for its current configuration and populate the settings when done.

Cameras using a non-default user (root) and password (pass) will display an error when using the **Scan Network Cameras** function.

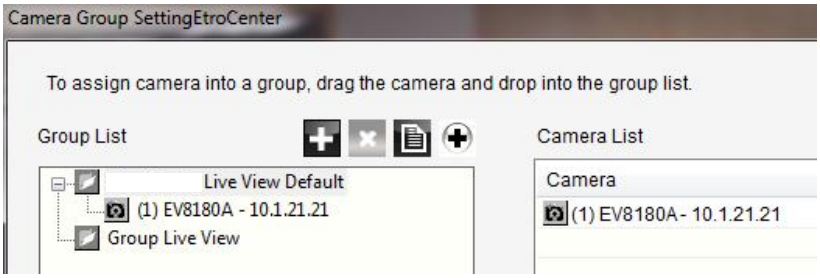
For cameras using non-default user / password credentials, the camera settings will need to be retried manually.


1. Enter the following camera information
Network
Connection Type : Dynamic IP Static IP PPPoE
IP Address : 192 . 168 . 0 . 164
Web Port : 80
Subnet Mask :
Model :
Name Server :
Mac Address :
Gateway :
Get Camera Info.
Credentials
User : root
Password : ••••••••
Liveview / Recording
Liveview :
Recording :
2. Click to retrieve camera settings
Disables camera, but doesn't remove camera
Channel ID : 8
Camera Enabled :
Scan Network Cameras...
Camera Name : 192.168.0.91 - EV8781U
Camera user/password; should use root account
Network
Connection Type : Dynamic IP Static IP PPPoE
IP Address : 192 . 168 . 0 . 91
Web Port : 8081
Subnet Mask : 255 . 255 . 255 . 0
Model : EV8781U
Name Server : 192 . 168 . 0 . 1
Mac Address : 00-19-6C-60-04-99
Gateway : 192 . 168 . 0 . 1
Get Camera Info.
Credentials
User : root
Password : ••••
Liveview / Recording
Liveview : Stream 1
Recording : Stream 1
Polls camera for settings; requires camera user/password
Select camera's video stream for live view and recording

The Liveview / Recording stream settings can be used to assign different camera video stream profiles based on needs. For example, a lower bandwidth stream can be used for live view while a high bandwidth stream is used for recording.

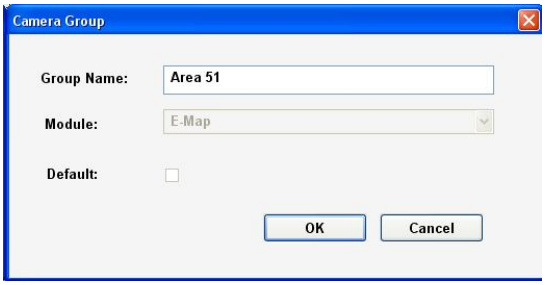

Select a camera stream to review the stream's settings
Camera PTZ & DI/DO settings
Stream : Stream 1
Video Compression Type : H264
Protocol : RTSP
Resolution : FULL HD
Port : 554
PTZ : Disable
PTZ Protocol :
DI (Digital Input 1) : Normal Close
DI (Digital Input 2) : Normal Close
DO (Digital Output) : Normal Close
Modify Video / PTZ ...
To change camera video or PTZ settings
Setting - Video / PTZ
Events
Select 1 or more groups for the camera
Groups
Group Description
Sector A
Group Live View
Etro Center Live View Default
Groups Settings...

Camera Groups

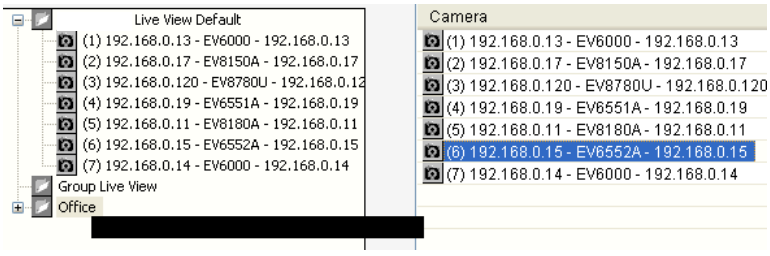

Camera Group SettingEtroCenter
To assign camera into a group, drag the camera and drop into the group list.
Group List
Camera List
Live View Default
(1) EV8180A - 10.1.21.21
Group Live View
Camera
(1) EV8180A - 10.1.21.21

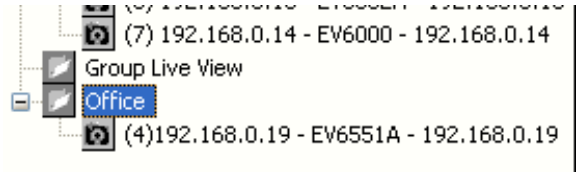
The icons are Add, Delete, Modify and Add NVR.

Adding a Group



After creating the group, cameras can be added by highlighting a camera, and left click-drag to the new group.



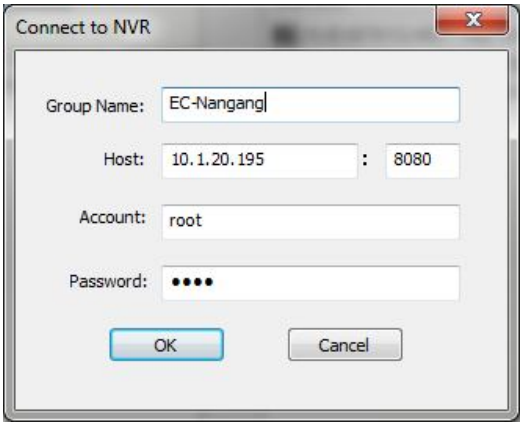


Adding an NVR

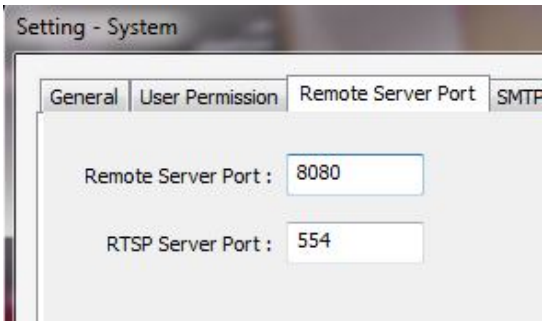
A different NGO CMS system's cameras or an EV9100 series NVR can be viewed can be added for viewing into NGO CMS.

To add an NVR's camera(s), select the Add NVR Camera icon

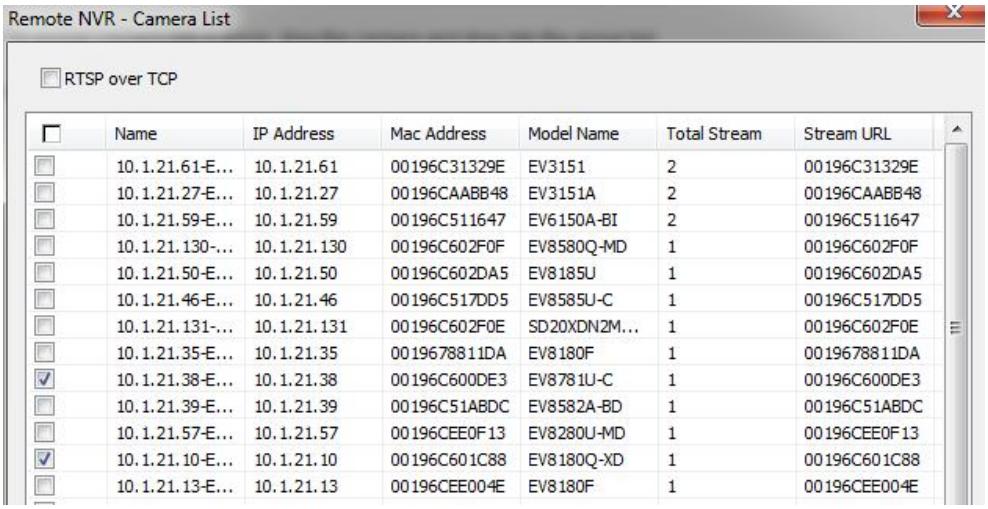
Enter the remote system's IP / URL, remote server port, and username / password.



NGO CMS's remote server port is defined in the System's **Remote Server Port** tab.

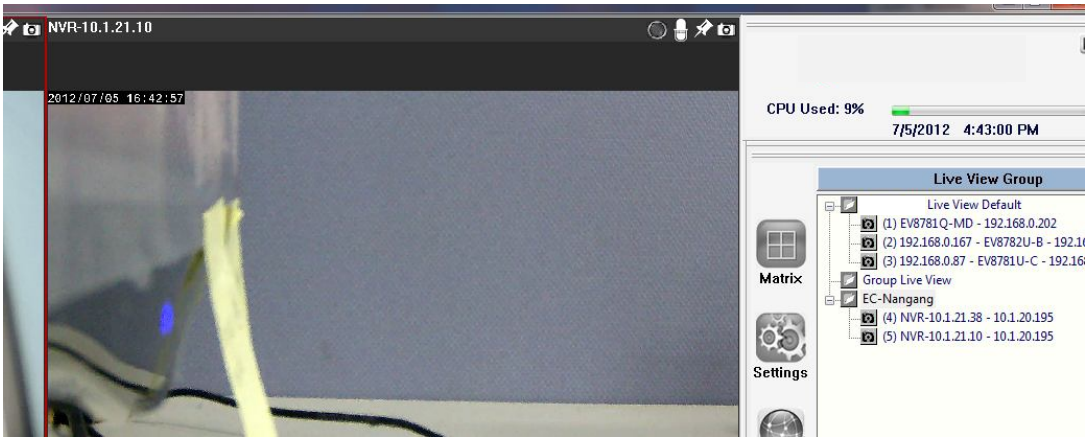


If the connection is successful, the remote NVR's camera list will be displayed. Select any or all cameras to include in the NVR group.

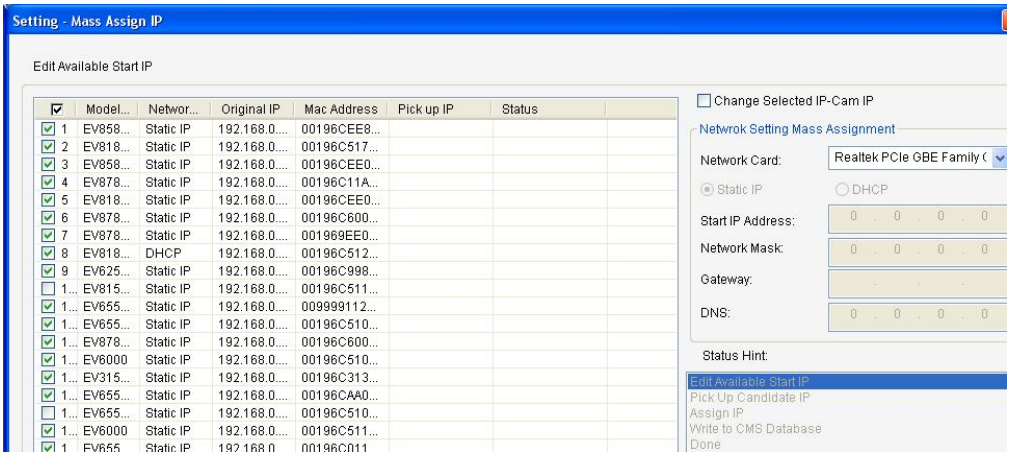


Check the RTSP over TCP box if TCP is preferred over UDP (the default).

Afterwards the camera group and selected NVR cameras will be displayed as a separate group in the NGO CMS's live view.



Assign IP

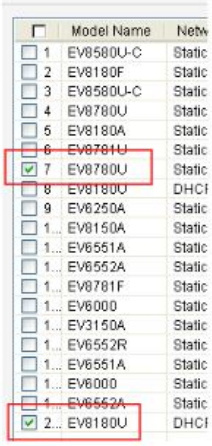


Assign IP has 2 main functions. It can be used to add multiple cameras to NGO. In addition, it can be used to assign a block of IP addresses to a several cameras.

1. Deselect all cameras

2. Uncheck if necessary

3. Select cameras to add

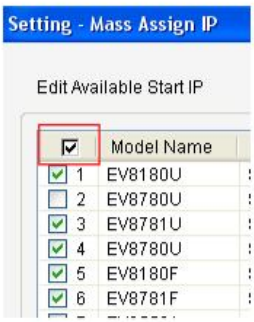


4. Click Next; Status will update as added

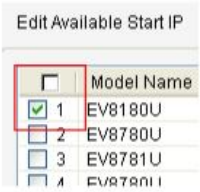
5. Click Next then Exit

Mass IP Assignment

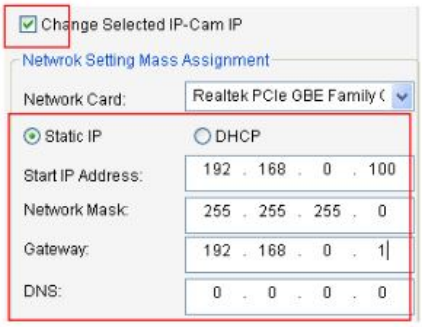
Check selects all cameras not currently in EtroCenter



Uncheck deselects all cameras; select specific cameras to modify

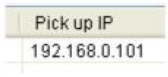


Check to enable Mass Assignment settings. Enter starting IP and related network settings to apply.

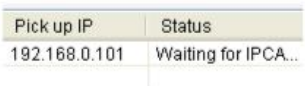


Click **Next** to continue.

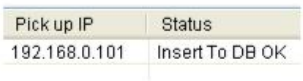
New IP to be assigned is displayed



Status changes while the update is in progress



Final status is displayed



Progess displayed in Status window

Click **Exit** when done. Cameras will be added to the default live view group.

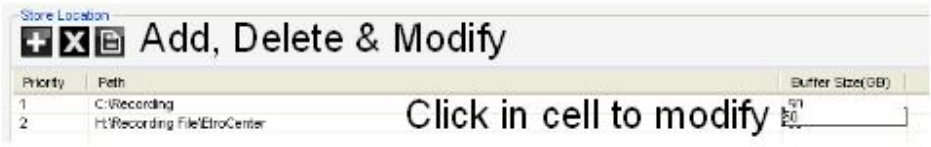
RECORDING

Recording settings can be accessed via the Settings options.

The top part of the Recording window relates to the video storage location. By default C:\Recording is video storage location.

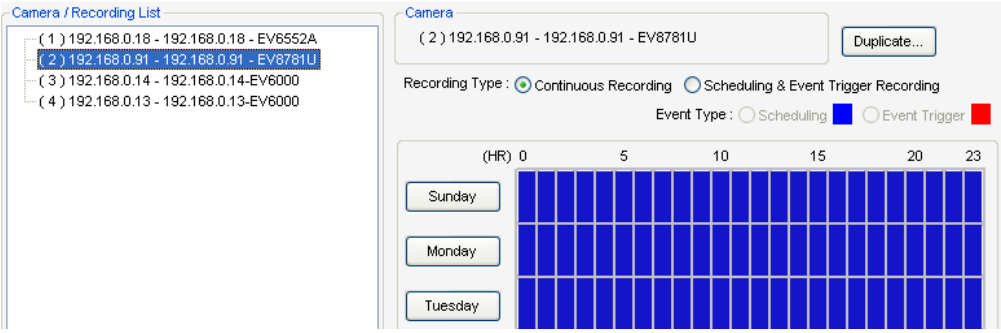
Buffer Size is a threshold that defines the amount of free space left available on the disk. If the buffer size threshold has been reached, NGO CMS will either write to another disk with available space or overwrite the oldest recordings.

The Priority field defines the order in which disks will be used for recording.

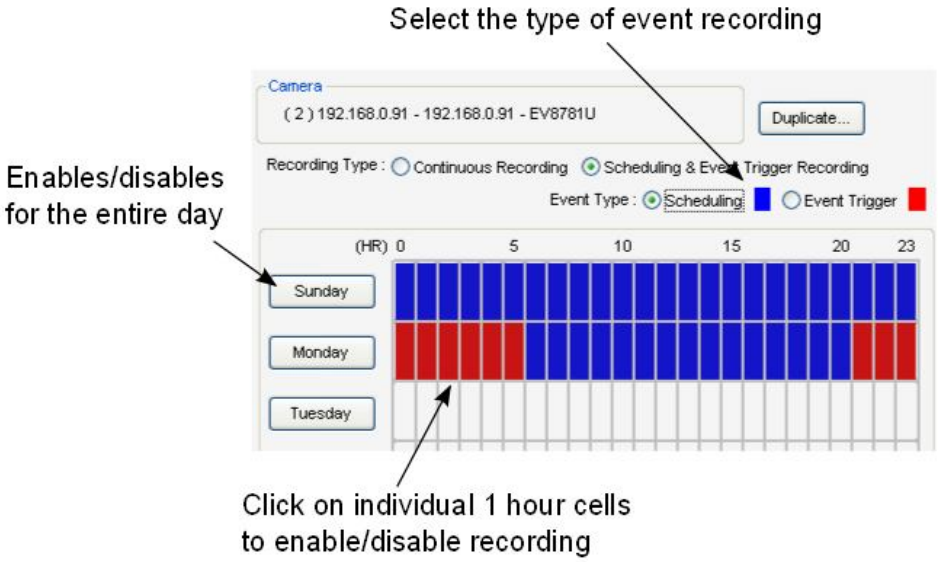


AVI video files are located in the appropriate date defined directory. Files should not be modified to maintain consistency with the NGO CMS database.

To view / adjust recording settings, highlight a camera in the Camera / Recording list. Recording is set to Continuous by default.


Camera / Recording List
(1) 192.168.0.18 - 192.168.0.18 - EV6552A
(2) 192.168.0.91 - 192.168.0.91 - EV8781U
(3) 192.168.0.14 - 192.168.0.14-EV6000
(4) 192.168.0.13 - 192.168.0.13-EV6000
Camera
(2) 192.168.0.91 - 192.168.0.91 - EV8781U
Duplicate...
Recording Type : Continuous Recording Scheduling & Event Trigger Recording
Event Type : Scheduling Event Trigger
(HR) 0 5 10 15 20 23
Sunday
Monday
Tuesday

The record at specific times or use event triggered recording, click the **Scheduling & Event Trigger Recording** option.


Select the type of event recording
Camera
(2) 192.168.0.91 - 192.168.0.91 - EV8781U
Duplicate...
Recording Type : Continuous Recording Scheduling & Event Trigger Recording
Event Type : Scheduling Event Trigger
Enables/disables for the entire day
(HR) 0 5 10 15 20 23
Sunday
Monday
Tuesday
Click on individual 1 hour cells to enable/disable recording

Event Trigger Recording will record for the period which the event lasts as well as a 5 second period prior to and following the event.

The camera also needs to enable the event trigger (i.e. motion detection) in order for NGO CMS's **Event Trigger Recording** to record. No recording will take place if the camera is not triggering events.

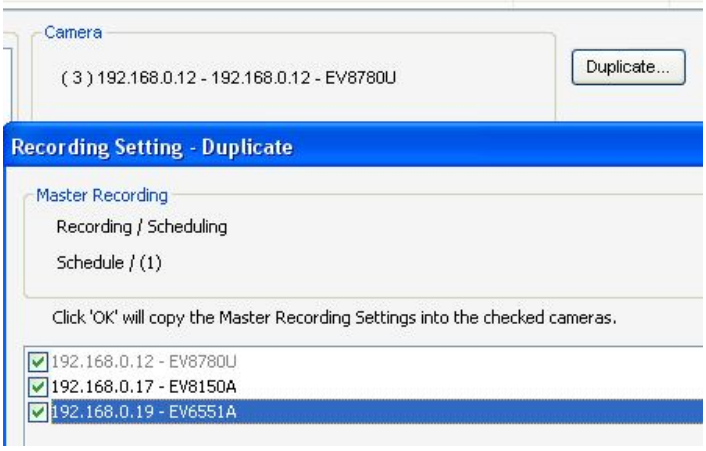
When using motion detection, if recording is not taking place when motion is present, it is important to verify that the camera has triggered motion detection events. The camera may not be properly identifying desired motion detection situations; hence, no event is triggered.

Use the camera's event log to verify the occurrence and duration of the motion detection.

```
Jan 31 14:56:32  : TYPE=MOTION,Trigger=001,hitX1=36,hitY1=29
Jan 31 14:56:33  : TYPE=MOTION,Trigger=001,hitX1=46,hitY1=29
Jan 31 14:56:34  : TYPE=MOTION,Trigger=001,hitX1=31,hitY1=27
Jan 31 14:56:35  : TYPE=MOTION,Trigger=001,hitX1=55,hitY1=15
Jan 31 14:56:36  : TYPE=MOTION,Trigger=001,hitX1=59,hitY1=29
Jan 31 14:56:37  : TYPE=MOTION,Trigger=001,hitX1=42,hitY1=26
Jan 31 14:56:38  : TYPE=MOTION,Trigger=001,hitX1=36,hitY1=31
Jan 31 14:56:39  : TYPE=MOTION,Trigger=001,hitX1=34,hitY1=27
Jan 31 15:15:46  : TYPE=NLOSS,NET=DOWN,IF=ETHERNET
Jan 31 15:15:48  : TYPE=NLOSS,NET=UP,IF=ETHERNET
Jan 31 15:16:49  : TYPE=NLOSS,NET=DOWN,IF=ETHERNET
```

The camera's motion detection settings may need to be adjusted to produce motion detection for a specific environment.

The Duplicate button will copy a camera's recording settings to 1 or more other cameras.



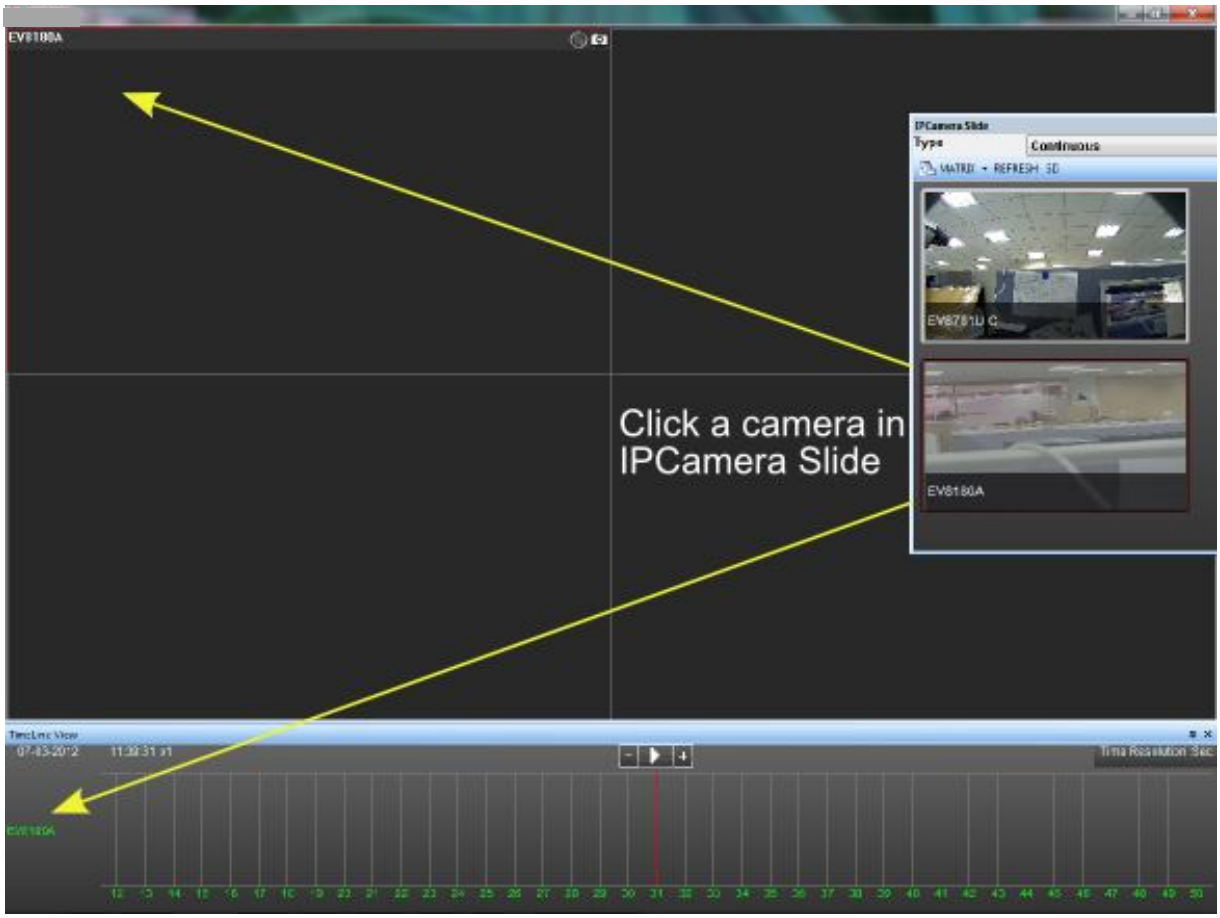
PLAYBACK

Video playback is accessed via the Appl. menu.

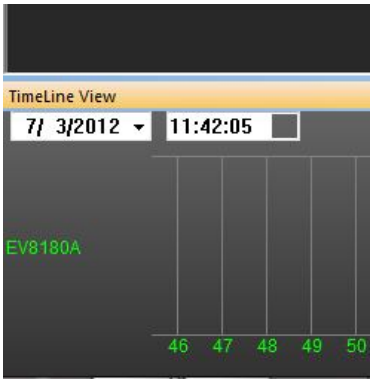
Upon opening Playback, if a camera has recorded video, it will be displayed in the **IPCamera Slide** pane. The **IPCamera Slide** pane will display Continuous recorded files by default.

Continuous Recordings

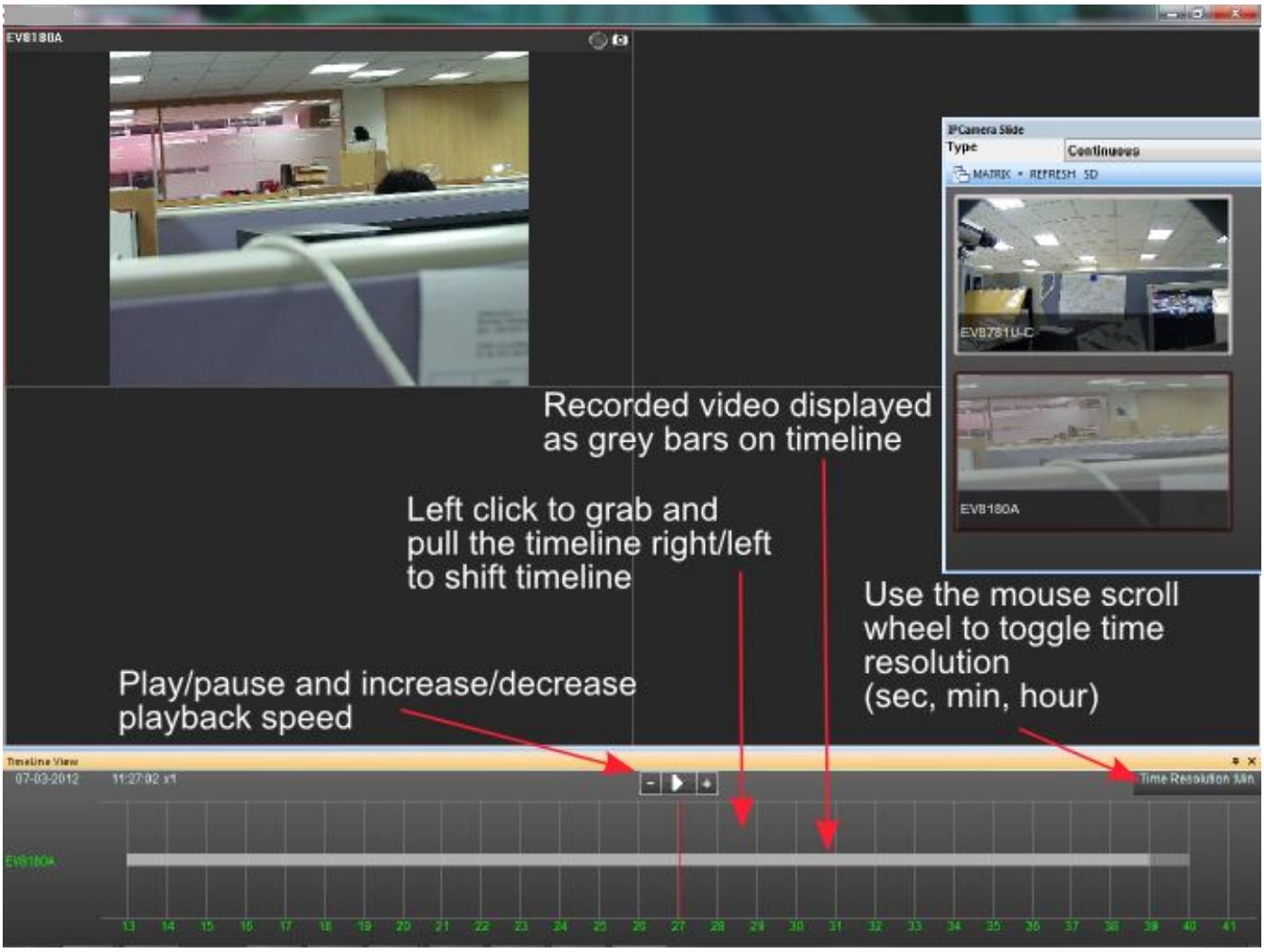
Clicking on a camera will load the camera's recorded video in the **TimeLine View** and reserve a pane in the Playback view.



The **TimeLine View** will display any recorded video files. Clicking in the **TimeLine View** area will enable this area (**TimeLine View** menu bar changes from blue to orange).A specific day / time can also be configured.



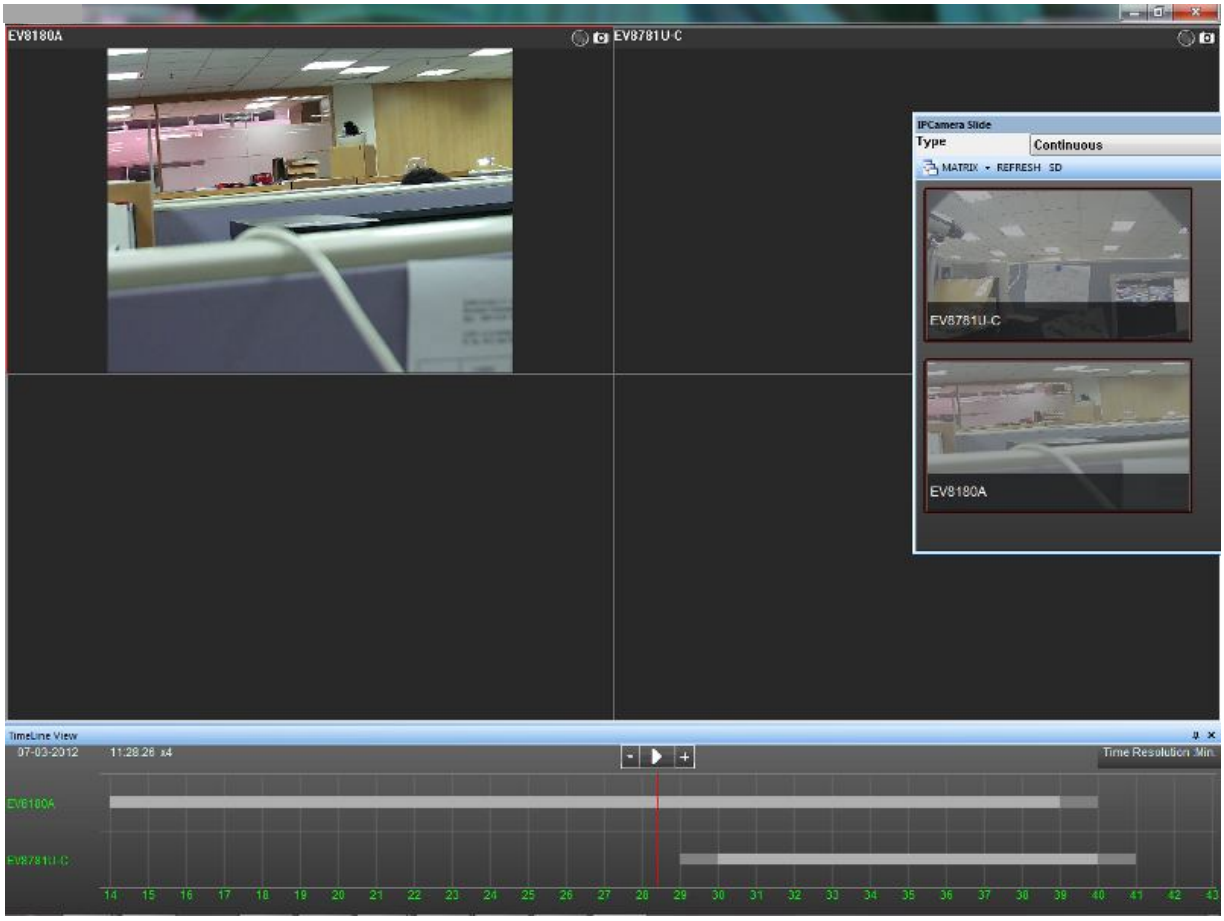
By default the **TimeLine View** will use seconds for displaying the timeline. The timeline can also display minutes and hours; this can be adjusted using the mouse scroll wheel (the **TimeLine View** pane must be the active pane).



Recorded video files will displayed as grey bars on the timeline; the bar will correspond to the time in which the recording took place.

The timeline can be shifted by left click & hold on the timeline, then pull left or right to shift the time period displayed.

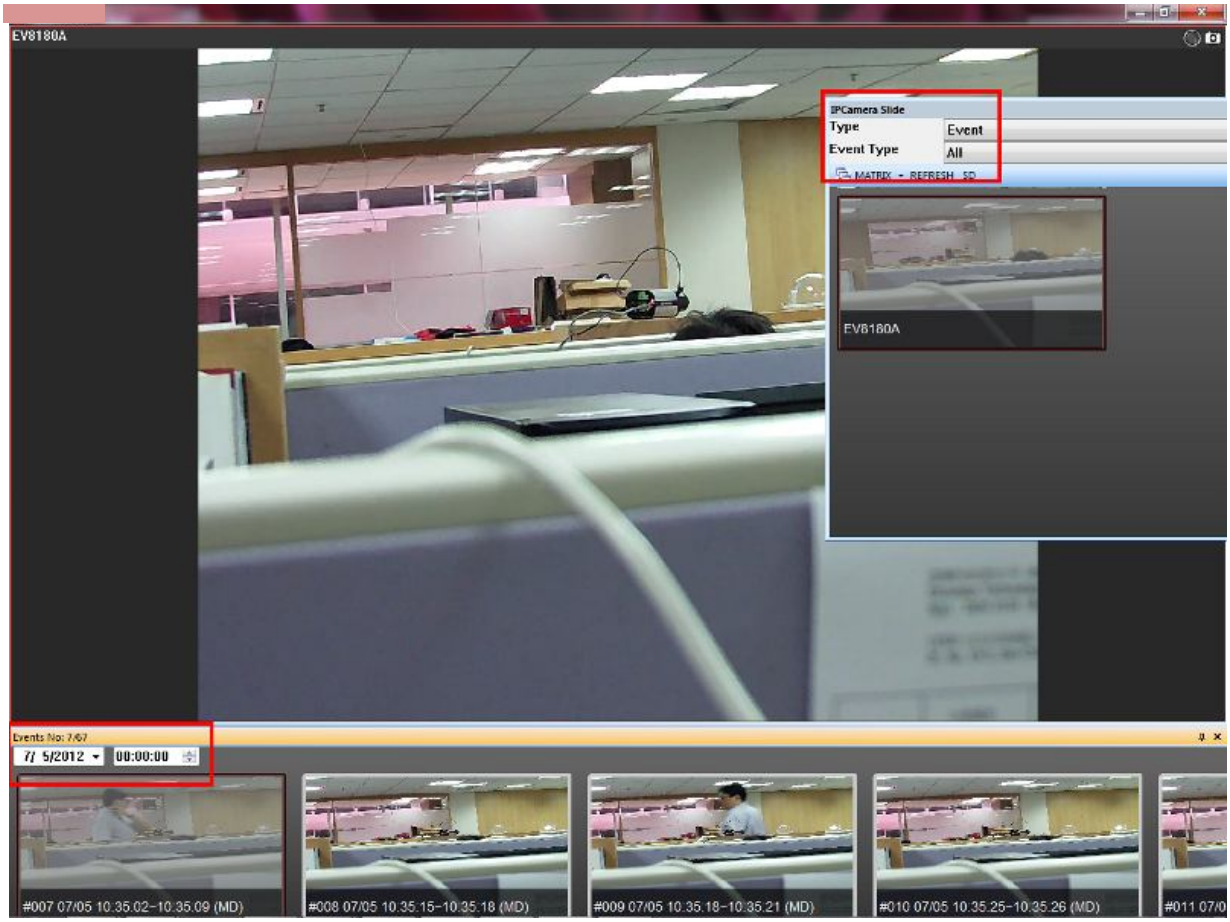
Multiple camera videos can be displayed in the **TimeLine View** by selecting the cameras in the **IPCamera Slide** view.



Event Recordings

For NGO CMS to perform event triggered recording, the camera will need to be configured to trigger events. Please refer to the camera's firmware user manual for instructions on configuring event triggers.

In **the IPCamera Slide** pane Type field, select Event to display recordings generated by camera events (e.g. motion detection). If any cameras have generated recordings by event, then the cameras will be displayed in the **IPCamera Slide** pane.

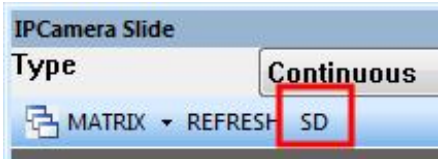


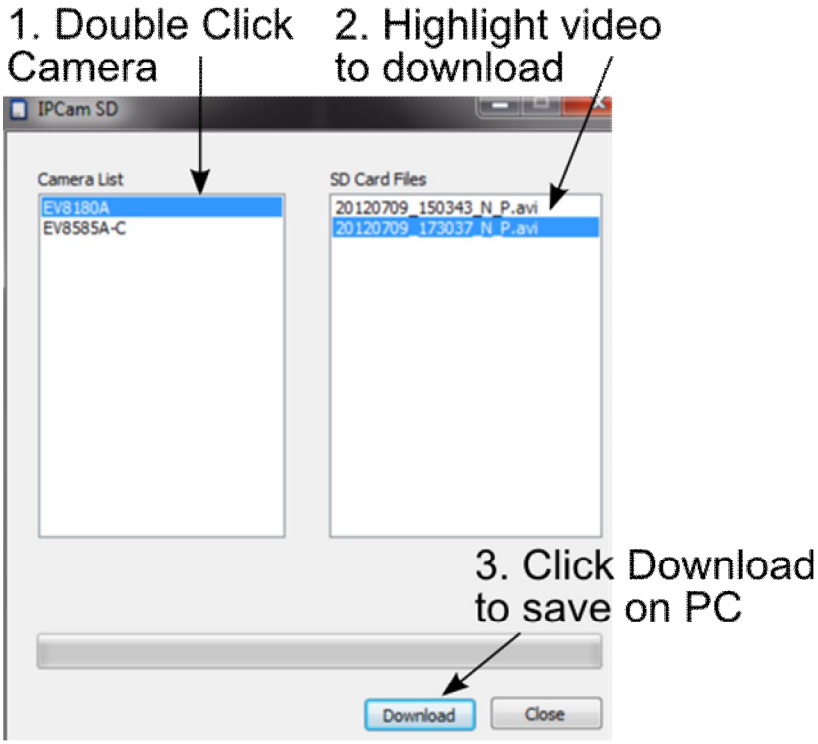
Selecting a camera in the **IPCamera Slide** view will display video clips in the lower pane. The video displayed will depend on the beginning search date / time. Double clicking a video clip will play the video in the playback screen.

Event Type in the **IPCamera Slide** view can be used to filter by the type of event.

Camera SD Card Recordings

Files recorded locally on to a camera's SD card can be downloaded to the PC using NGO CMS's Playback interface. The SD Card download interface can be accessed by clicking the **SD** option in the IPCamera Slide pane.

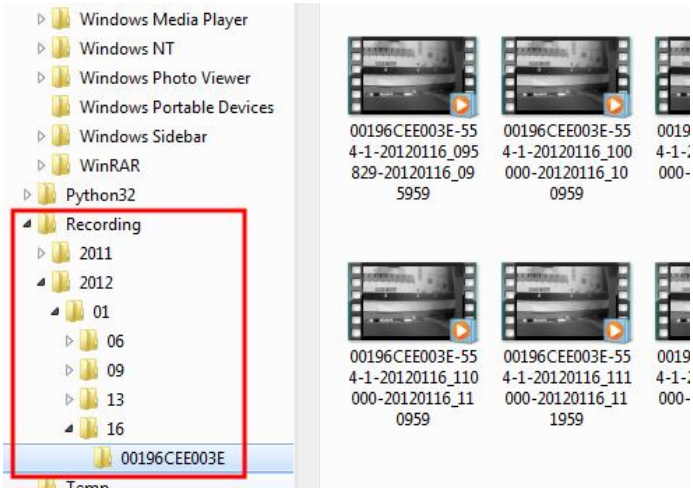




After clicking Download, select the desired download destination; the file will then be downloaded to the appropriate directory.

Recorded Files

Recorded files (AVI) can be found in the file system; location will depend on the recording location which is defined in the Recording settings (default C:\Recording). Directory structure is defined by date/time and the device's MAC address.

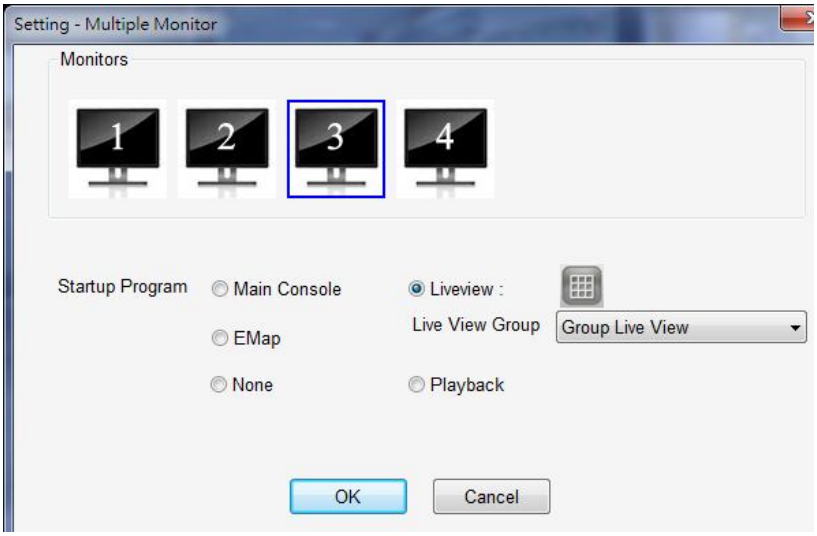


MULTIPLE MONITORS

Multi-monitor configuration is available from the Settings menu.

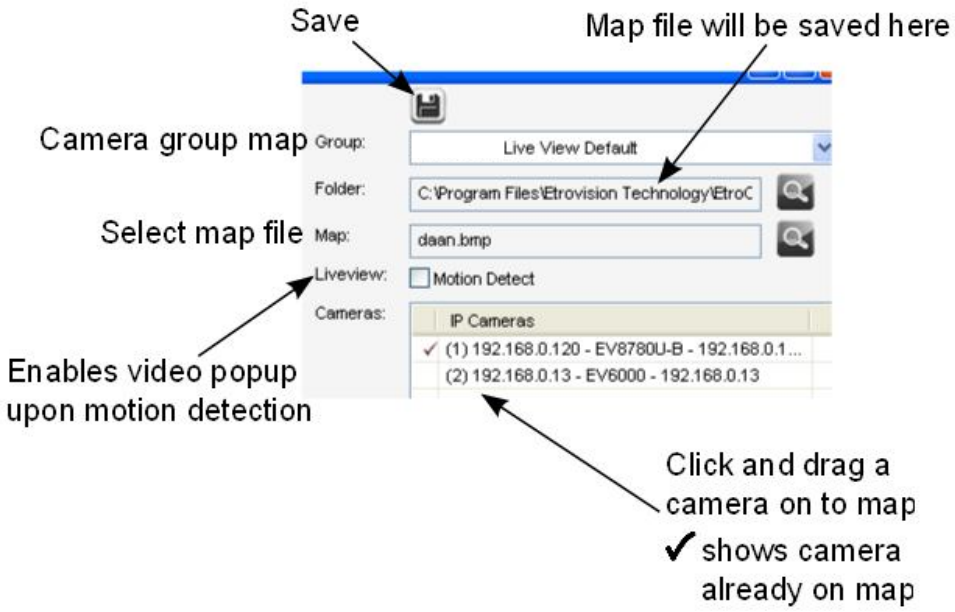
If the computer has been configured with multiple monitors, then specific NGO CMS program functions can be assigned to a specific monitor.

Select a monitor by clicking on monitor icon and selecting NGO CMS function to be displayed. Click OK to save changes.



EMAP

Emap setup



ACCESS CONTROL

NGO CMS's Access Control module integrates NGO's access control devices (devices that control door, elevator, parking access) with NGO CMS. Please contact NGO for more information about Access Control products.

SYSTEM SETTINGS

The system settings can be accessed via the System icon in NGO CMS Settings.

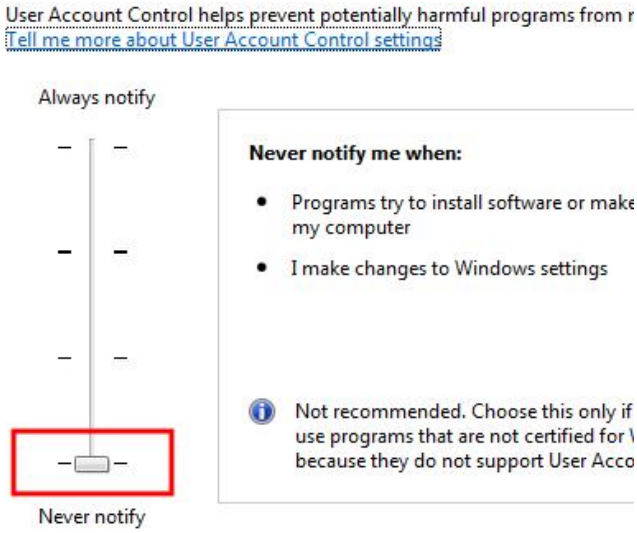
General

The **General** tab provides Language options and startup options.

NGO CMS processes can be configured to start upon starting the PC (the default). This will not start the NGO CMS application on PC startup, but will start the background processes which perform actions such as recording.

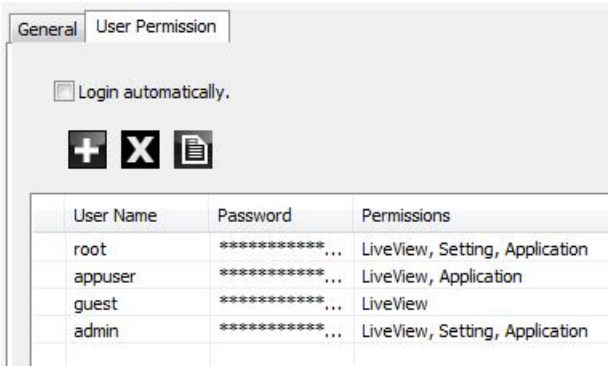
In addition, NGO CMS can be configured to be display in full screen mode (**Startup in Full Screen**) after starting NGO CMS.

Note: Win7 User Access Control must be disabled for NGO CMS to automatically startup after PC startup


User Account Control helps prevent potentially harmful programs from r
Tell me more about User Account Control settings
Always notify
Never notify me when:
Programs try to install software or make
my computer
I make changes to Windows settings
Not recommended. Choose this only if
use programs that are not certified for
because they do not support User Acco
Never notify

The **Enable Wizard** will display the camera setup wizard upon starting NGO CMS.

User Permission



Users can be added, deleted & modified.

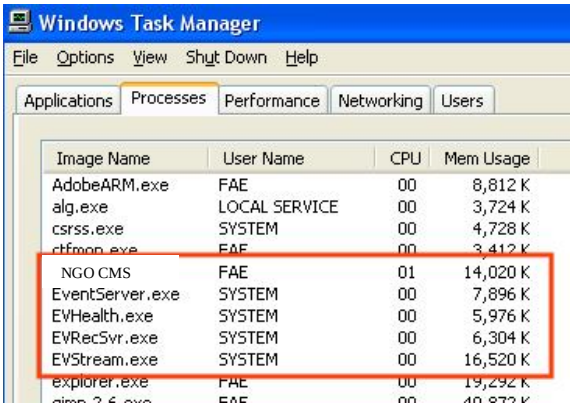
Users by default have **LiveView** privileges, and can be assigned privileges to the **Setting** and **Application** functionality. Users will / will not have access to the following areas based on the user's permission configuration.

Users require a password, and passwords must be 4-8 characters in length.

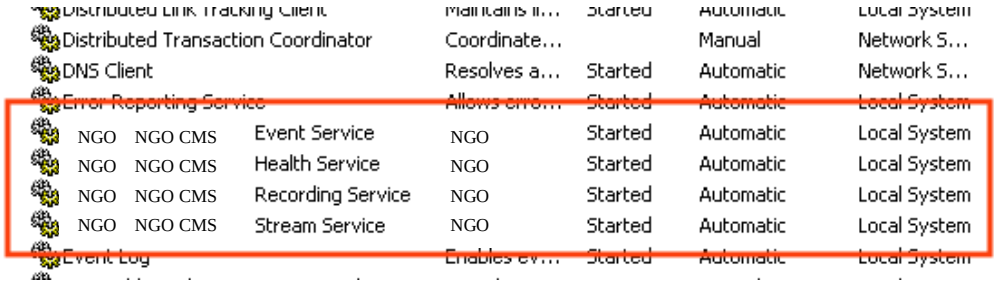
Login automatically can be enabled to login as a specific user when starting NGO CMS. Upon clicking the checkbox, a window is displayed requesting the automatic login's username & password. This user must correspond to an existing user / password.

NGO CMS PROCESSES

By default NGO CMS will start when the PC starts. NGO CMS processes are as shown.


Windows Task Manager
File Options View Shut Down Help
Applications Processes Performance Networking Users
Image Name User Name CPU Mem Usage
AdobeARM.exe FAE 00 8,812 K
alg.exe LOCAL SERVICE 00 3,724 K
csrss.exe SYSTEM 00 4,728 K
NGO CMS FAE 01 14,020 K
EventServer.exe SYSTEM 00 7,896 K
EVHealth.exe SYSTEM 00 5,976 K
EVRecSvr.exe SYSTEM 00 6,304 K
EVStream.exe SYSTEM 00 16,520 K
explorer.exe FAE 00 19,292 K

In the Services, the various services are listed as well as the Startup Type (Automatic or Manual). The startup method can also be changed via the Settings -> System icon.


Distributed Transaction Coordinator Coordinate... Manual Network S...
DNS Client Resolves a... Started Automatic Network S...
NGO NGO CMS Event Service NGO Started Automatic Local System
NGO NGO CMS Health Service NGO Started Automatic Local System
NGO NGO CMS Recording Service NGO Started Automatic Local System
NGO NGO CMS Stream Service NGO Started Automatic Local System

JOYSTICK

An NGO joystick can also be used with NGO CMS for use with PTZ enabled cameras. This is a separate accessory available from NGO. Other manufacturers' joysticks may work with NGO CMS, but are not inherently supported by NGO CMS.